EMBARCADERO
TECHNOLOGIES®

Product Documentation

Embarcadero® Performance Center™
New Features Guide

Version 2.7.2

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TABLE OF CONTENTS

MAJOR NEW FEATURES/IMPROVEMENTS

USING THE ACTION SCRIPTS

With the new action scripts setup, now you can create a new SQL action with a specified script from the Performance Center client. Actions that execute arbitrary commands are now easier to use. Rather than requiring that the action include the logic to send an email/notify the user, the standard output is now captured from the command and attached to the action notification. However, you can still able to execute a SQL script using the arbitrary command execution.

An [Action Script Example](#) follows.

When you create a new Action, you have the option to configure three different types of Actions:

Action Type	Description
Command	**Command Text**: Select existing executable (.exe or .bat) files from a Command File dialog. **Arguments**: Select an argument from a pull-right menu. The options available are: Datasource, Server, Statistic, Alert, and Environment. Your selection then appears in the Arguments list box. **Initial Directory**: Browse for and select an Initial Directory path. The full path appears in this field. Once you click **Finish** the new command appears in the Action List Box.
SQL	**SQL Statement:** Enter the SQL statement that you want to enact for the new action. Once you click **Finish** the new command appears in the Action List Box.

DBOptimizer	DBOptimizer Path: Opens the DBOptimizer executable file dialog where you can browse to the path where the DBPptimizer application resides.
	Output Folder: Opens the Browse for Folder dialog. Select the folder where you want the results to appear. the full path appears in this field.
	Time Interval: Set the time interval (in minutes) of how often you want this action to occur.
	Once you click Finish the new command appears in the Action List Box.

DBOPTIMIZER

This topic covers additional information on using Action Scripts and DBOptimizer.

Launching DBOptimizer doesn't involve any explicitly-specified command line arguments (the data source argument is inferred from the monitored data source).

Listed below are two examples of the command line options for DB Optimizer. The Profiling example is related to a performance alert where the DBA wants more information. The Tuning example shows a command line option in PC. This tuner command line option is more for tools like DB Artisan that might want to send a query to DBO.

Profiling:

```
dboptimizer.exe profile ds:<data source> duration:<profile session duration in
minutes> tofile:<profile session save file.oar> <overwrite>
```

Example:

```
dboptimizer.exe profile ds:romlaborcl8i_1 duration:120 tofile:c:\testtest.oar
overwrite
```

NOTE: Duration was measured in seconds in DB Optimizer 1.5. Starting in DB Optimizer 1.5.1 it is measured in minutes.

Tuning:

```
dboptimizer.exe tune ds:<data source> sqlfile:<path to sql file>
```

Example:

```
dboptimizer.exe tune ds:romlaborcl8i_1 sqlfile:c:\sqlfile.sql
```

For more information, see Setting Up an Action Script to DBOptimizer and and Tuning SQL with DB Optimizer.
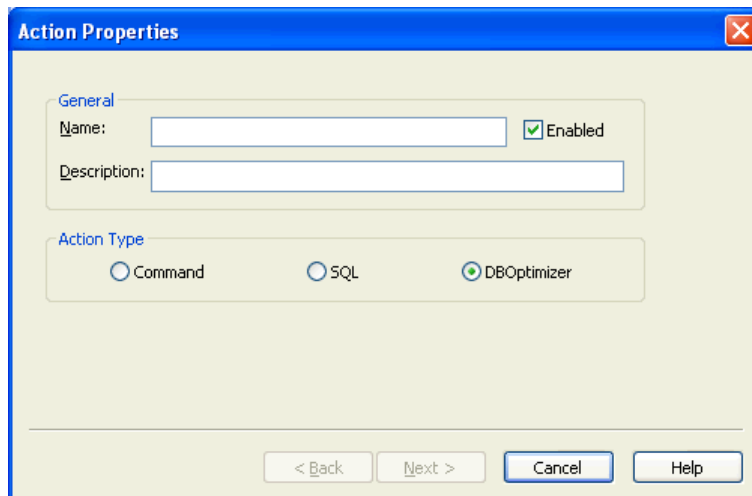
Setting Up an Action Script to DBOptimizer

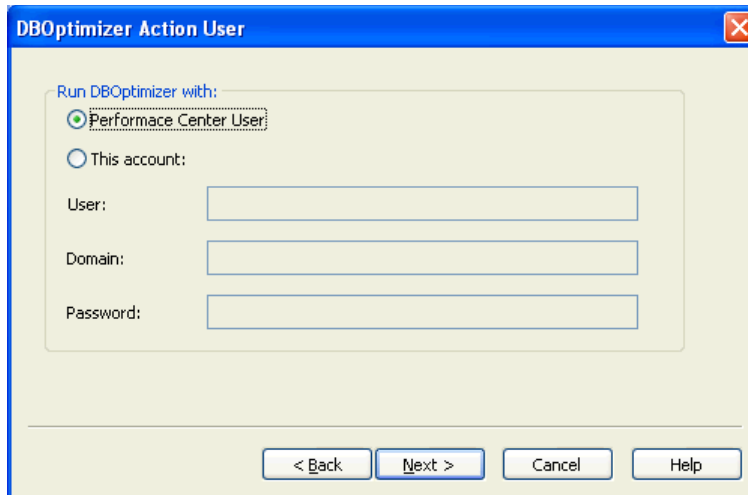There are two requirements for using the DB Optimizer Command Line option:

- The specified data source has to be already registered, with correct credentials.
- The files have to be correct. If the overwrite option is in the script, the file will be overwritten.
-

Each tool has its own set of data sources and it is recommend that the user keep the data source names the same on each tool.

1. From the main menu select **Maintenance > Actions** and the Action maintenance dialog appears.
2. Click **Add** to open the Action Properties dialog.
3. Enter the name of the action you want to create and click the Enabled option.
4. **Optional**: Enter the description of the action.
5. In the Action Type section select **DBOptimizer** and click **Next**.

6. You have two options to run DBOptimizer with: **Performance Center User** and **This account.**

Performance Center User

If the Performance Center service runs as a local windows user who installed DB Optimizer, then it should be able, by default, to read and write to those users directories and no extra steps are necessary.

For example if I, user "user1", installed DB Optimizer on my desktop then my workspace and datasource directories would be in

C:\documents and settings\user1

For example:

- **Workspace** (by default)
  C:\documents and settings\user1\dboptimizer\workspace
- **Datasources** (by default)
  C:\documents and settings\user1\Application Data\embarcadero\workspace
- **Metadata** (by default)
  C:\documents and settings\user1\Application Data\embarcadero\workspace\metadata

This Account

If you select this option, you must supply custom credentials (user, domain, and password). If the "Embarcadero Performance Center" service is running as "Local System" the files have to be located outside of the local user's directory.
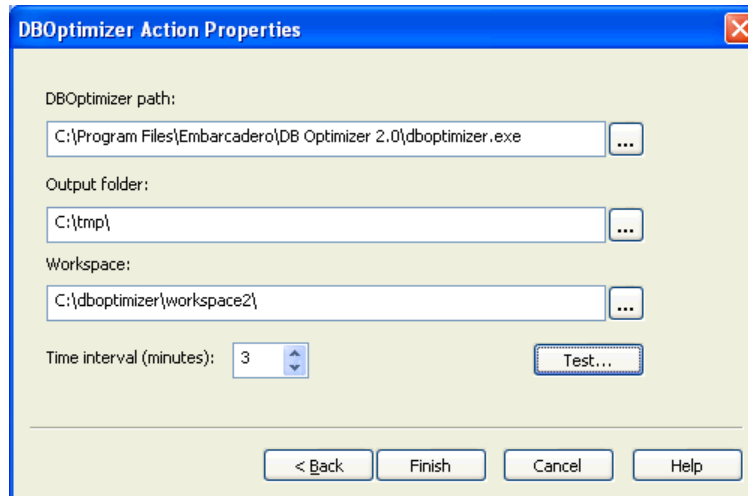
The Performance Center service user, "Local System" can't access these user's directories, so these directories have to be moved to a location such as:
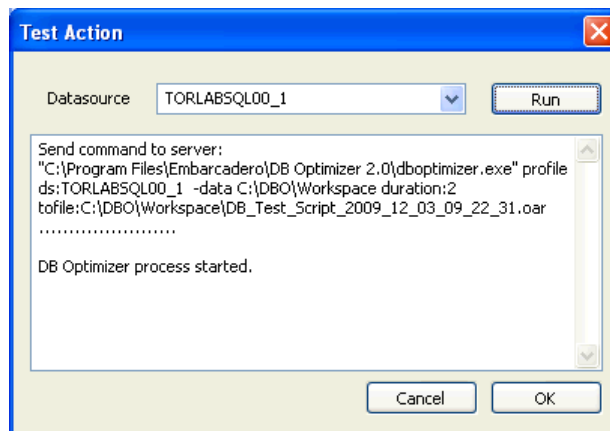
C:\dboptimizer

For example:

- C:\dboptimizer\workspace (the workspace used for profiling)

- C:\dboptimizer\outputfiles\ (the folder that will contain the output of the profiling session. The name of the file will be in the form [action_name][yyyy_MM_dd_hh_mm_ss].oar.

7. After you have populated the text fields in the DBOptimizer Action Properties dialog, click **Test**. The Test Action dialog appears.

8. Select the Datasource from the drop-down list and click **Run**. The Performance Center server will start a profiling session with a duration of two minutes on the target data source.
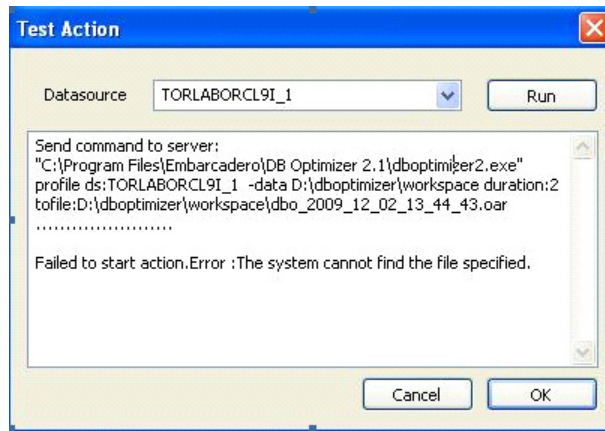

The test action output will look like the screen shot shown above if the action is started. In this case you will have to check if the output file is created.

NOTE: It takes some time until the oar file will appear in output folder because DBO has to start (approximately 1-2 minutes) and after that it will take another 2 minutes for profiling

To accomplish this, the Performance Center client will send a command to the server to execute the action and the command line will be shown in the output window:

- The command sent to server is based on the properties entered in the Properties dialog.
- DBOptimizer will use a workspace in the folder with the same name as the target datasource that is located in the folder previously selected.
- You should check the output folder to see if the file [output_folder]\[*action_name_yyyy_mm_dd_hh_mm_ss].oar* was created. If this file wasn't created, you can check the logs from DBOptimizer that should be in the workspace folder.
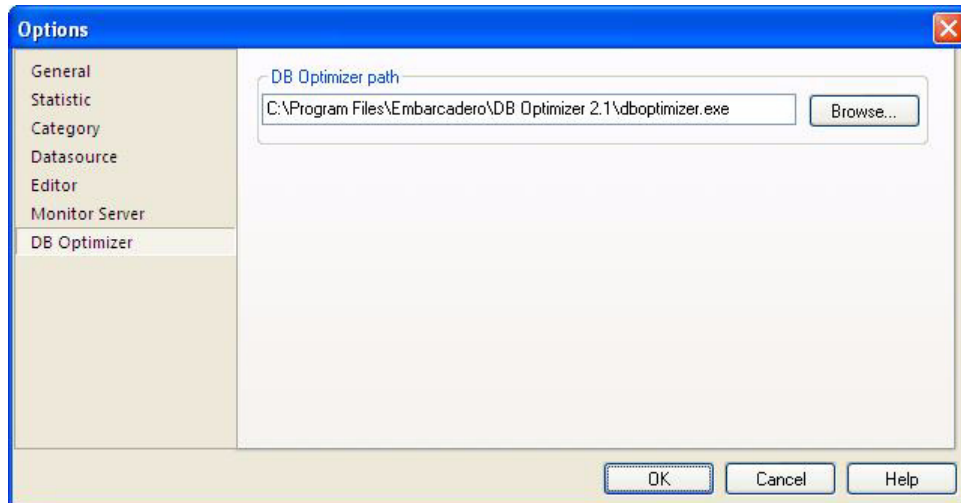
  NOTE: In Case of an error the output could resemble the following screen shot. In this example the path to the DB Optimizer executable was incorrect.

Tuning SQL with DB Optimizer
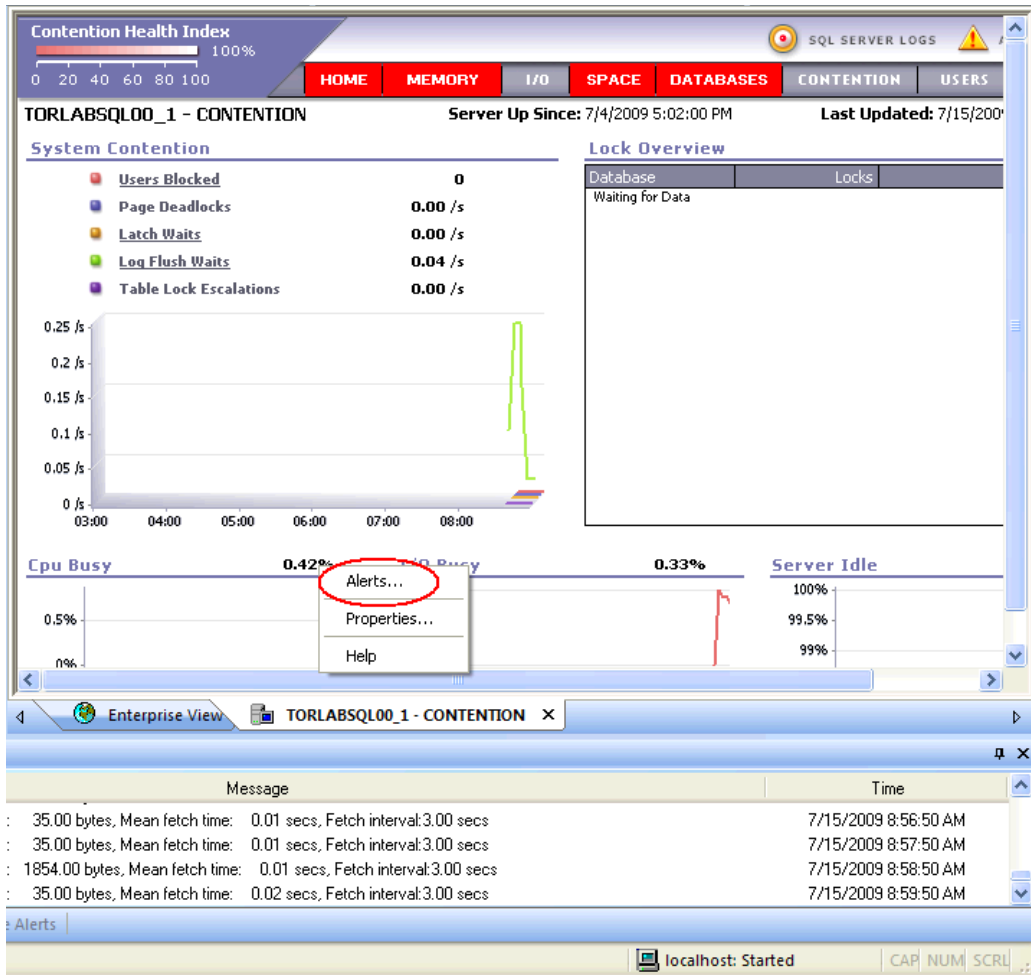
Tune SQL is now executed with DB Optimizer.

1. In the Datasources pane, double-click **Top SQL** and the Top SQL dialog appears.

2. Select your criteria and click **Show SQL** (located in the upper right-hand corner of the dialog.

3. Choose a 'SELECT" query from the SQL Text list and cick **Tune SQL**.DB Optimizer starts a tune session for the selected query. If the path to DB Optimizer was not set in the client option previously, the Client will ask for you for the path
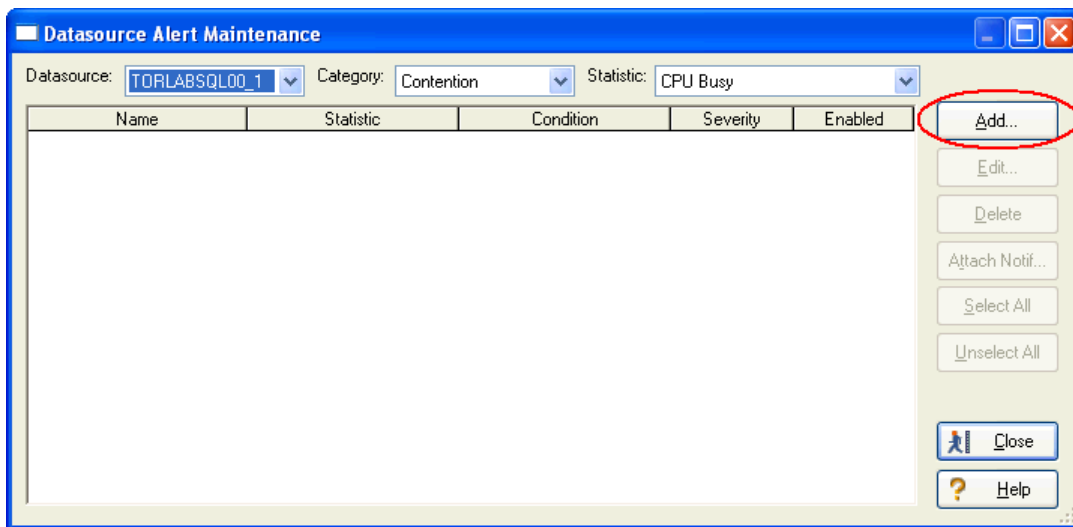

ACTION SCRIPT EXAMPLE

The following is a brielf walkthrough of how to get information about active sessions. In this example we will set a SQL script to get an email when CPU usage on your server gets too high.
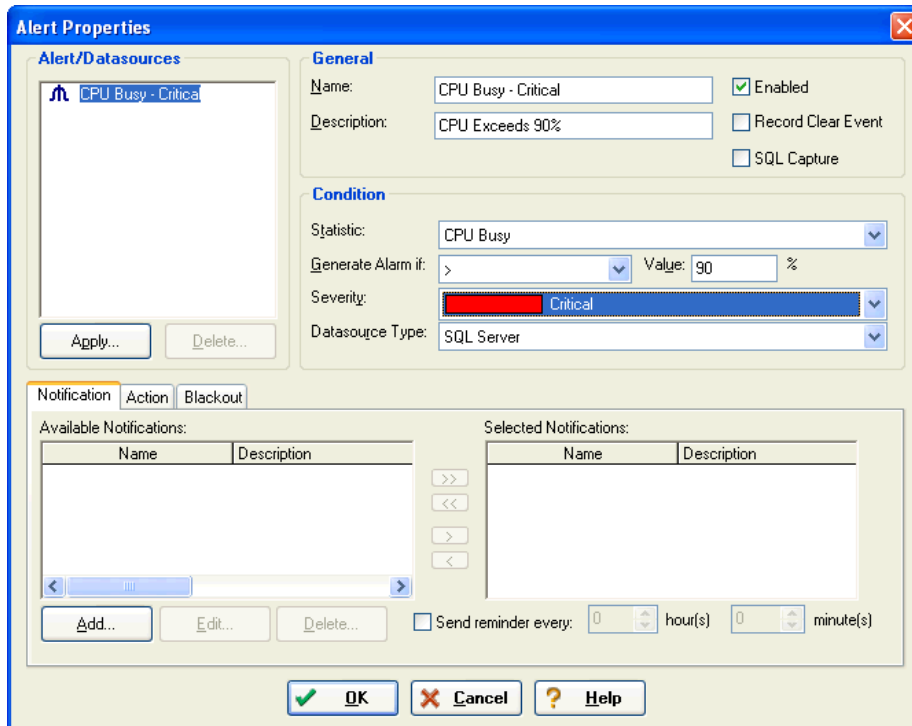
1. In your registered datasource, open the Contention tab.

2. Right-click on CPU Busy, and click **Alerts** on the context menu.
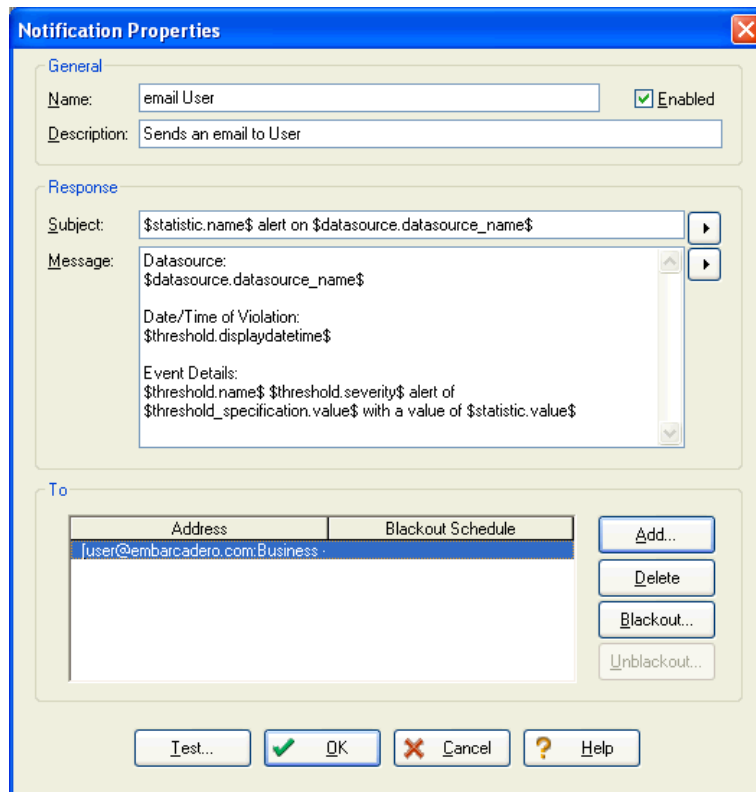
3. In the Datasource Alert Maintenance dialog, click **Add** to add a new alert.

4. In the Alert Properties dialog, enter the appropriate descriptions and values you want to include.
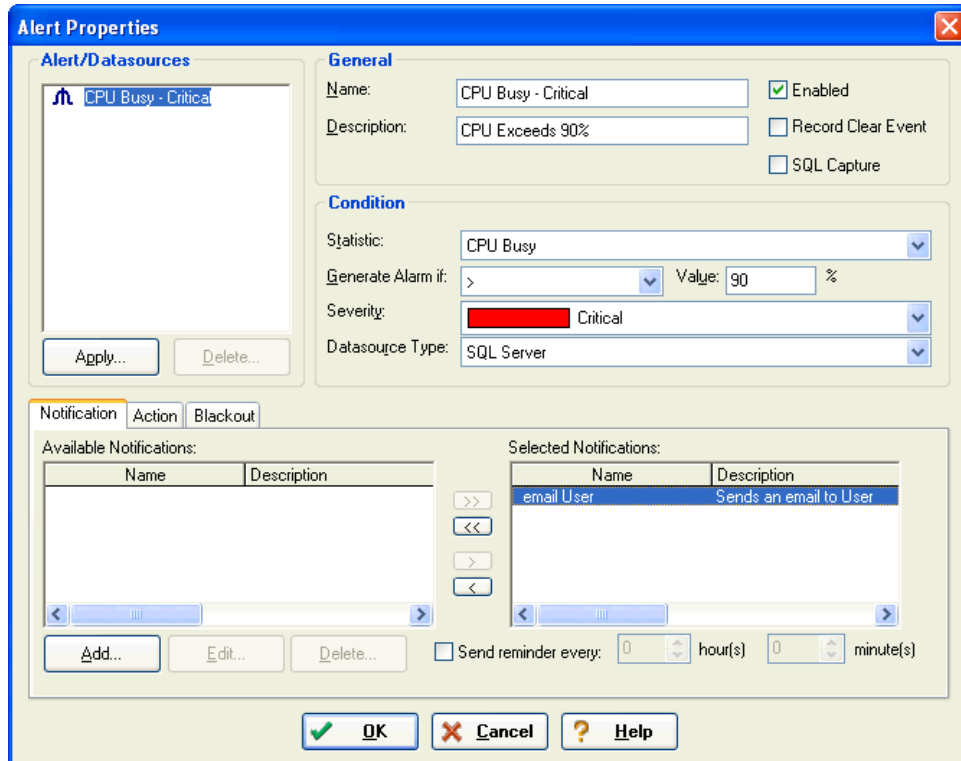
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5. Under the Notification tab, click **Add** to open the Notification Properties dialog and configure the appropriate notification.
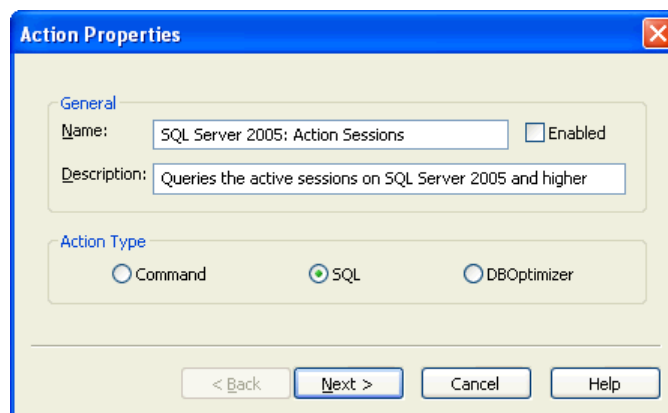
NOTE: You can also add a email address in this dialog.

6. Once you have established a Notification, in the Alert Properties dialog select that new notification and move it to the Selected Notifications list box.

7. Click the Action tab and then click **Add**. The Action Properties dialog appears. Enter the name and description of the action. For this example, select SQL. However if you want to execute a command on the Performance Center Server or launch DBOptimizer, select those options instead.

8. Once you select SQL, click **Next** to open the SQL Action Properties dialog.

9. Enter the SQL statement and click **Finish**. The newly created Action appears in the Action list box.

10. Select this new action in the list box and move it to the Selected Action list box.

11. When the alert fires, you will receive the result of the SQL action as part of the notification email.

   NOTE: If you are using Outlook, you may get the message "Extra line breaks in this message were removed". Click on that to put the line breaks back in (otherwise all your rows will blend together).

```
Datasource:.
ROMLABPCSQL05

Date/Time of Violation:
Tuesday, July 14, 2009 13:28:46

Event Details:
CPU Busy - Critical Critical alert of 5 with a value of 13.572401271009



The following action was run:

Action name: SQL Server 2005: Active Sessions
Action output:

host_name, program_name, login_name, command, text
ROWMFROH01, DBArtisan, sa, SELECT, SELECT * FROM sys.all_objects a , sys.all_objects b ,
           sys.all_objects c, sys.all_objects d
ROVMMFROH05, DataServer Module, sa, SELECT, SELECT s.host_name, s.program_name,
           s.login_name,r.command,
     substring(t.text, (r.statement_start_offset/2)+1 ,
               ((case r.statement_end_offset when -1 then datalength(t.text)
                     else r.statement_end_offset end - r.statement_start_offset)/2) + 1)
                  as text
FROM sys.dm_exec_sessions s
INNER JOIN  sys.dm_exec_requests r ON s.session_id =session_id
CROSS APPLY sys.dm_exec_sql_text(r.sql_handle) t WHERE  s.status=unning'
```
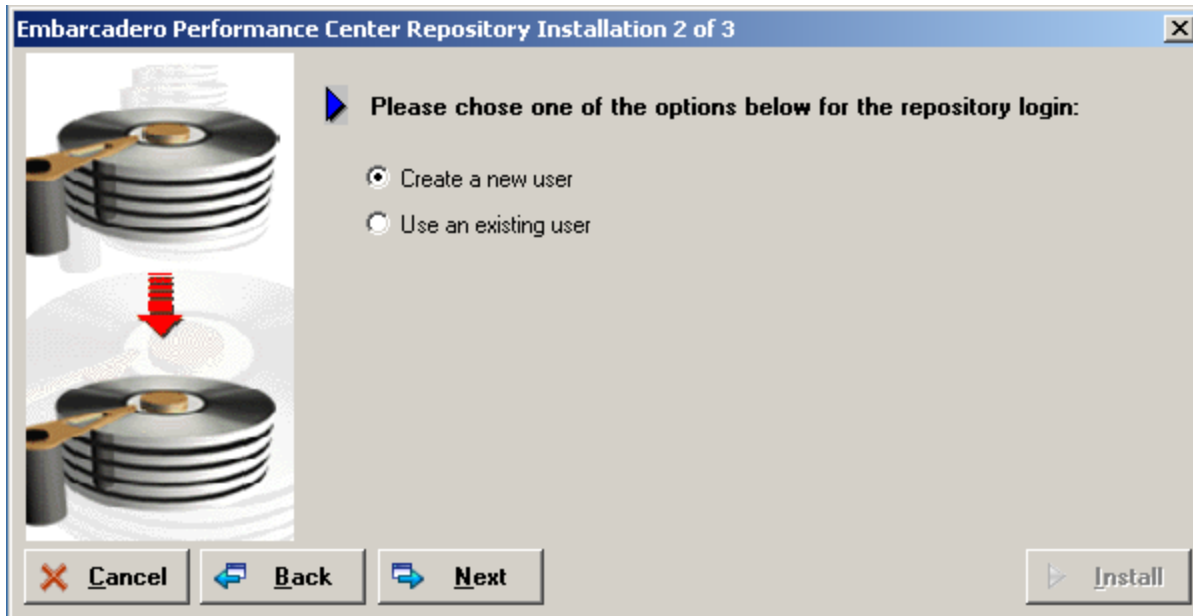
OTHER NEW FEATURES/IMPROVEMENTS

INSTALLATION CHANGES

CREATING A PERFORMANCE CENTER REPOSITORY WITHOUT SYSADMIN PRIVILEGES

Sysadmin privileges are no longer required when creating a new Performance Center repository using the default setup. In particular, it is no longer required that a new user must be created during default setup. Instead, any user with the required privileges may be used.

The repository installation wizard now has an additionl step, where you can choose whether to create a user (requiring a login with appropriate privileges to create the user) or to use an existing user.

Please chose one of the options below for the repository login:

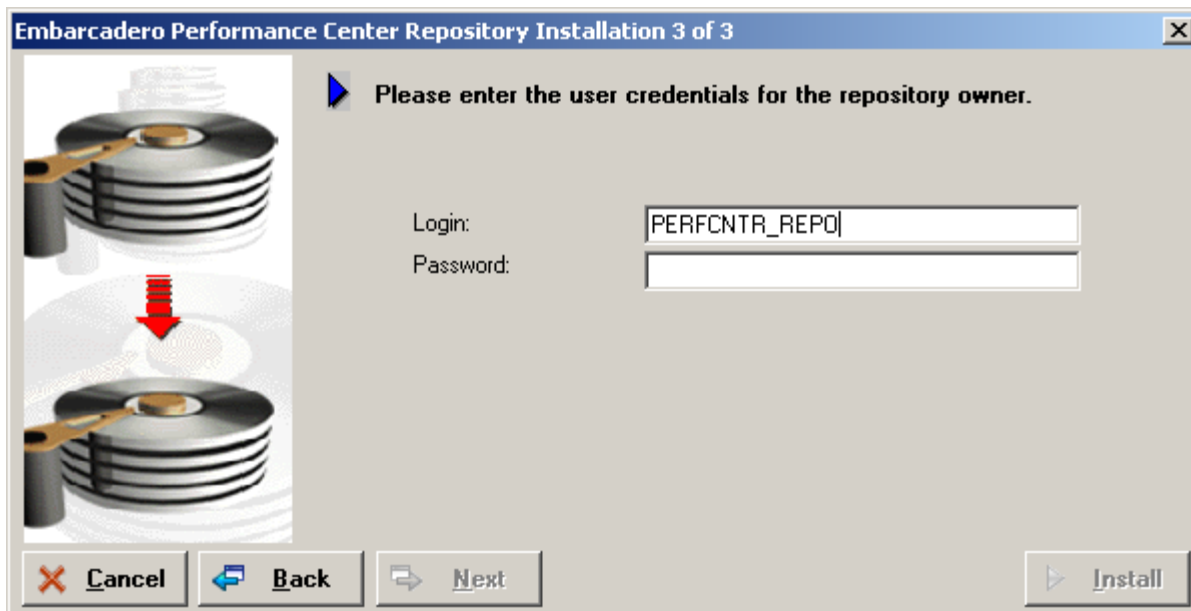- ⦿ Create a new user
- ○ Use an existing user

✖ **Cancel**   ⬅ **Back**   ➡ **Next**   ▷ **Install**

If the application user chooses to create a new database user, they are presented with the old dialog, which requires a login by a user with sufficient credentials to create the user. The user is no longer forced to use sa (on SQL Server/Sybase) or SYS (on Oracle).

Please login to the selected database.

- ○ Use OS Authentication
- ⦿ Use Database Authentication

Login: | sa |
Password: | |

A new login for repository owner will be created. Please supply a unique login name.

Create New Login: | PERFCNTR_REPO |
Create New Password: | |

✖ **Cancel**   ⬅ **Back**   ➡ **Next**   ▷ **Install**
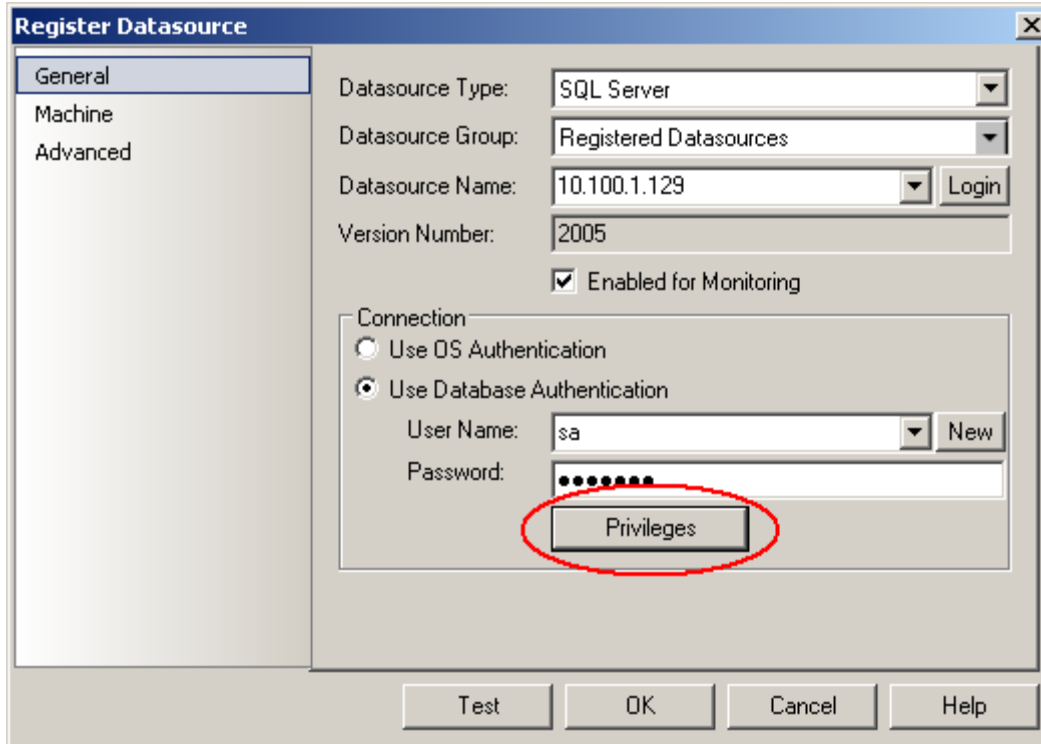
If you choose to use an existing user, you need only provide the login information for that user:
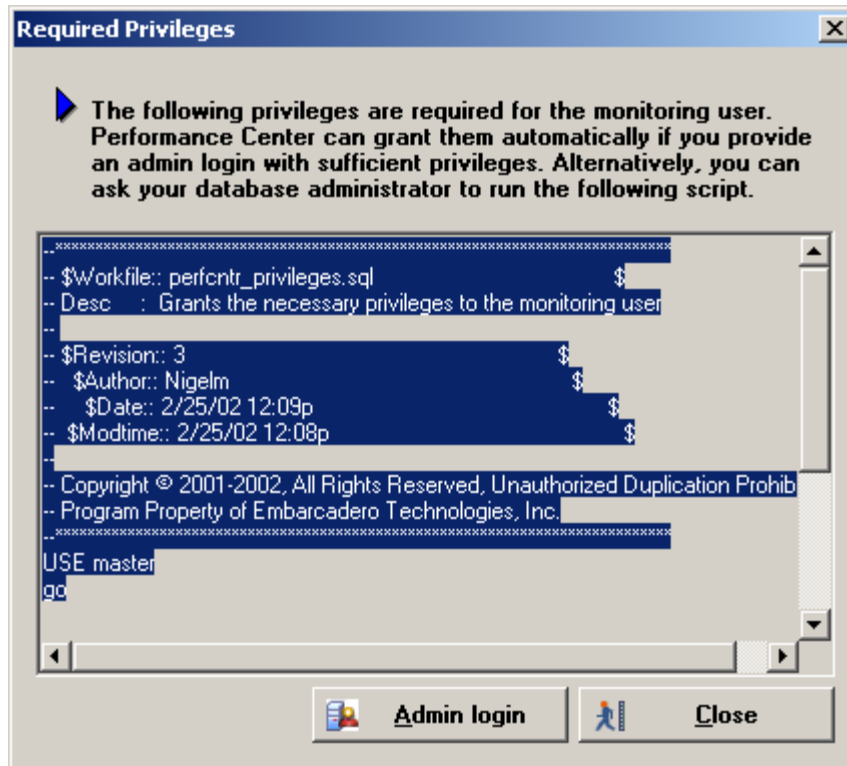
No longer automatically trys to grant privileges to the monitoring user when registering datasources

In previous releases, when registering a datasource, Performance Center would require a sysadmin login to the datasource in order to grant the privileges required for monitoring to the monitoring user.

Now, when registering a datasource, you may use an existing user (created separately) who already has the privileges required for monitoring (for example, if this datasource was previously registered with Performance Center). Furthermore, you can click Privileges to view a script that grants the required privileges to the monitoring user (and creates any auxiliary objects required for monitoring).

If you click *Privileges*, a dialog opens, from which you can copy and paste the script to send to their sysadmin (to grant the appropriate privileges). If a user has a sysadmin login (or at least a login with sufficient credentials to grant the required privileges), they may enter their login details and have Performance Center run the script.

ADDITIONAL RESOURCES

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- Online Demos
- Technical Papers
- Discussion Groups

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